

ABSTRACT

Methods and apparatus for reducing the number of runtime checks performed during the execution of a virtual machine. According to one aspect of the present invention, a computer system includes a preloader, a compiler, and a virtual machine. The preloader is arranged to determine whether a bytecode makes an active reference to a class which requires an execution of a static initializer, and is also arranged to determine if the class has a superclass which requires the execution of the static initializer. The compiler is arranged to accept a source file generated by the preloader as input and to produce an object file, and the virtual machine is arranged to execute the object file.

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